

DETAILED ACTION

Remarks

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/20/11 has been entered.

Information Disclosure Statement

The information disclosure statements filed on 08/17/2010 and 01/30/2011 have been considered by the Examiner.

The information disclosure statements filed on 01/20/2011 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Pages 3-4 of 4 of the information disclosure statement (01/20/2011) under section Non-Patent References, Applicants listed several documents associated with the cite numbers 3-3, 3-5, 4-2. These documents do not appear to be same as the prior arts being provided or listed.

Accordingly, the information disclosure statement (01/20/2011) is being considered by the Examiner only to the extent of the non-patent references submitted. Therefore, the application is allowed due to these considered parts.

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David D. Wier (Reg. No.: 48,229) on 03/23/2011. The application has been amended as follows:

Please amend:

55. (currently amended) A method for transmitting content in a communications network, the method comprising:

(A) configuring a table to cause content to be routed over a first path in said communications network;

(B) ~~analyzing whether a specified amount of time has~~ comparing an elapsed time relative to the transmission of content via the first path against a threshold amount of time; and

(C) based at least in part on the ~~analyzing~~ comparing step (B), when said ~~specified amount of time has elapsed~~ time relative to the transmission of content via the first path ~~exceeds the threshold amount of time~~, querying at least one overlay software module for one or more costs associated with one or more alternate paths;

(D) comparing the one or more costs associated with the one or more alternate paths and a cost associated with the first path;

(E) based at least in part on the comparing step (D), selecting the first path or an alternate path as an optimal path based at least in part on which path is associated with a lower cost; and

(F) modifying the table to cause content to be routed over a second the optimal path in said communications network; and

wherein the communications network comprises the Internet and wherein communication among nodes of the first path uses at least an Internet protocol, and communication among nodes of the one or more alternate paths uses at least the Internet protocol.

58. (currently amended) A method as recited in claim 55, wherein the modifying step (EG) comprises: designating a neighboring node in the ~~second~~ optimal path as a next hop.

59. (currently amended) A node in a communications network, the node comprising:

a first port operable to receive content destined for a destination node in the communications network;

one or more output ports operable to transmit content to at least a first path in said communications network and a second path in said communications network;

an overlay software module operable to determine a first cost associated with the first path and a second cost associated with the second path; and

a table configurable to cause content received at the first port to be selectively transmitted from the one or more output ports to either the first path or the second path in response to instructions derived from: (A) an analysis of an amount of elapsed time during which the table has been configured such that content has been transmitted from the one or more output ports to a current path; and (B) a comparison of the first cost and the second cost; and

wherein the current path comprises the first path and, wherein the table is modifiable to cause content to be routed from the one or more output ports to the second path if the amount of elapsed time exceeds the threshold amount of time and the first cost is greater than the second cost; and

wherein the communications network comprises the Internet and wherein communication among nodes of the first path uses at least an Internet protocol, and communication among nodes of the second path uses at least the Internet protocol.

62. (currently amended) A node as recited in claim 59 ~~61~~, wherein the first path is an overlay forwarding path.

64. (currently amended) A method for transmitting content in a communications network, wherein a table entry is configured to cause content to be transmitted via a first path in said communications network, the method comprising:

(A) comparing an elapsed time associated with transmitting content via the first path with a threshold amount of time; ~~and~~

(B) modifying the table to cause content to be transmitted via a second path in said communications network as a result of the comparing step when: (i)A ~~when~~ the elapsed time associated with transmitting content via the first path exceeds the threshold amount of time; and (ii) a first cost associated with the first path is greater than a second cost associated with the second path, wherein at least the second cost is determined by querying an overlay software module; and

wherein the communications network comprises the Internet and wherein communication among nodes of the first path uses at least an Internet protocol, and communication among nodes of the second path uses at least the Internet protocol.

65. (currently amended) A method for transmitting content in a communications network, the method comprising:

(A) configuring a table to cause content be routed to a first path in said communications network;

(B) analyzing comparing an elapsed time associated with transmitting content via the first path against a threshold amount of time;

(C) modifying the table to cause content to be routed to a second path in said communications network ~~based on analysis of when~~ the elapsed time ~~against~~ exceeds the threshold amount of time;

(D) subsequent to the modifying step (C), analyzing comparing a first cost associated with transmitting content via the second path against a threshold cost;

(E) if the first cost exceeds the threshold cost, querying at least one overlay software module for one or more costs associated with one or more alternate paths;

(F) comparing the first cost and the one or more costs associated with one or more alternate paths;

(G) based at least in part on the comparing step (F), selecting the second path or an alternate path as an optimal path based at least in part on which path is associated with a lower cost, and

(H) modifying the table to cause content to be routed to a the optimal path distinct from said second path based on analysis of the cost against the threshold cost; and

wherein the communications network comprises the Internet and wherein communication among nodes of the second path uses at least an Internet

protocol, and communication among nodes of the one or more alternate paths uses at least the Internet protocol.

73-76. (canceled)

77. (currently amended) A method as recited in claim 55, wherein a first network comprises the first path and a second network comprises the ~~second~~ one or more alternate paths.

81. (currently amended) A method for transmitting content in a communications network, the method comprising:

(A) configuring a table to cause content to be routed via a first path in said communications network, said first path having been determined based at least in part on a first cost associated with transmitting content via the first path; and

(B) ~~based at least in part on how much time has~~ in response to an elapsed time since relative to said configuring in step (A) exceeding a threshold time, querying at least one overlay software module for one or more costs associated with one or more alternate paths;

(C) comparing the one or more costs associated with the one or more alternate paths and a second cost associated with the first path;

(D) based at least in part on the comparing step (C), selecting the first path or an alternate path as an optimal path based at least in part on which path is associated with a lower cost; and

(E) modifying the table to cause content to be routed via a ~~second~~ the optimal path in said communications network, ~~said second path having been determined based at least in part on a second cost associated with transmitting content via the second path; and~~

wherein the communications network comprises the Internet and wherein communication among nodes of the first path uses at least an Internet protocol, and communication among nodes of the one or more alternate paths uses at least the Internet protocol.

82. (currently amended) A method as recited in claim 81, wherein the ~~second path is selected~~ second cost and the one or more costs associated with the one or more alternate paths are based at least in part on the then-current state of the network.

84. (currently amended) A method as recited in claim 81, wherein the ~~second~~ one or more alternate paths comprises at least one overlay node.

85. (currently amended) A method for transmitting content in a communications network, the method comprising:

(A) configuring a table to cause content to be routed to a first node, a first network comprising said first node; and then, after a specified in response to an elapsed amount of time relative to the configuring step (A) exceeding a threshold time ~~has passed since said configuring,~~

(B) querying at least one overlay software module for one or more costs associated with one or more alternate nodes;

(C) comparing the one or more costs associated with the one or more alternate nodes and a cost associated with the first node;

(D) based at least in part on the comparing step (C), selecting the first node or an alternate node as a next hop based at least in part on which node is associated with a lower cost; and

(E) modifying the table to cause content to be routed to the next hop a second node, a second network comprising said second node, and said second node being distinct from the first node,

wherein the communications network comprises the Internet and wherein communication among nodes on the first network uses at least an Internet protocol, and communication among the one or more alternate nodes on the second network ~~uses at least the Internet protocol;~~ and

wherein a first overlay path comprises the first node and wherein a second overlay path comprises the one or more alternate nodes.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance: None of the prior art references teach (alone or in combination) all the limitations together, within the independent claims 55, 59, 64, 65, 81, 85. For example, the independent claims contain limitations, *when an elapsed time relative to the transmission of content via a first path in a communications network exceeds a threshold amount of time, querying at least one overlay software module for one or more costs associated with one or more alternate paths; based at least in part on a comparing the one or ore costs associated with the one or more alternate paths and a cost associated with the first path, selecting either the first path or an alternate path as an optimal path based on which path has a lower cost; and wherein the communication network comprises the Internet and wherein communication among nodes of the first path and among alternate nodes of the alternate paths uses at least the Internet protocol.* Applicants' arguments [filed 1/20/2011, pages 10-20] are considered persuasive to the limitations of this claim over the prior art of record. Examiner agrees that the limitations of the independent claims are allowable subject matter over the prior art, in light of the specification, with above limitations [see Specification, paragraphs 0020-0029, 0053-0056]. Most prior art teaches, transmission of data packets over a public packet-switched network comprises a step of monitoring the data packet traffic across the bypass network connection, and disconnecting said bypass network connection when no data packets have been transmitted between the source router and destination router for a threshold amount of time [see patent 6,137,792]. Furthermore, the other prior art teaches, a system for

managing virtual circuits and determining proper routing of packets in a network environment. The procedure comprises a step for determining whether to establish a new virtual circuit by using a timer to control the frequency at which new virtual circuits are established. The routine determines when the virtual circuit setup timer has exceeds a predetermined threshold value, then determines whether value of adding the additional virtual circuit outweighs the cost of the additional state information required to indicate the existence of the new virtual circuit. According to these, the procedure is implemented in a connection-oriented network or a virtual network (i.e. ATM); and when the timer exceeds the threshold value, then establishing new virtual circuits [see patent 5,854,899], which is distinguish with the instant application for the modifying the table to cause the content to be routed over the optimal path in the Internet protocol communications network when the elapsed time exceeds the threshold time. .

Therefore, the combination of the limitations, within its environment, is allowable subject matter, in light of the specification and in view of the Applicants' persuasive arguments. The independent claims 55, 59, 64, 65, 81, 85 (and their dependent claims) are allowable, since the claim language discloses this combination of limitations in accordance with the specification, over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Claims 55-56, 58-59, 62-68, 77-85 are allowed.

Corresponding Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH-CHAU NGUYEN whose telephone number is (571)272-4242. The examiner can normally be reached on 7AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, GLENTON BURGESS can be reached on (571) 272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. N./
Examiner, Art Unit 2442

/KEVIN BATES/
Primary Examiner, Art Unit 2456